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future. In the administration of the national forests there is being developed gradually what I believe to be a truly scientific system for attaining a concrete economic end, a system of controlling certain correlated industries with a single purpose in view—the maximum of the welfare of the nation as a whole. In spite of many mistakes which we have undoubtedly made and which we have attempted to correct as we went along, in spite of the lack of practise and experience in solving the problems at hand, this new policy, it seems to me, has already proved entirely safe and workable.

HENRY S. GRAVES

U. S. FOREST SERVICE

MATHEMATICS, ASTRONOMY AND PHYSICS AT THE CALIFORNIA MEETING

A JOINT session of the American Mathematical Society, the American Astronomical Society and Section A of the American Association for the Advancement of Science will be held on Tuesday, August 3, at the University of California, for the presentation of two addresses:

The Human Significance of Mathematics: by Professor C. J. Keyser, Columbia University, New York.

The Work of a Modern Observatory: by Dr. George E. Hale, Mount Wilson Solar Observatory.

On Friday, August 6, the American Astronomical Society and others interested in astronomical research will make an excursion to the Lick Observatory, Mount Hamilton, near San José. The director of the Mount Wilson Solar Observatory, near Pasadena, extends a cordial invitation to men of science interested in astronomical and physical research to visit the observatory either before or after the San Francisco meeting of the association.

Physicists are invited to attend a joint session for mathematics, astronomy and physics on Tuesday, August 3. One session of the meetings devoted to physics will give consideration to recent spectroscopic investigations.

On the occasion of the visit of the association to Stanford University on Wednesday, August 4, Professor Harris J. Ryan will give demonstrations with high potential electric currents in the new laboratory which has been equipped for high potential experimentation.

SCIENTIFIC NOTES AND NEWS

DR. CHARLES H. HERTY, professor of chemistry in the University of North Carolina, has been elected president of the American Chemical Society for the year 1915. The address of the retiring president, Professor Theodore W. Richards, of Harvard University, written for the Montreal meeting of the society which was abandoned on account of the war, has been printed in the *Journal of the American Chemical Society* for December. The subject is "The Present Aspect of the Hypothesis of Compressible Atoms."

THE Perkin medal of the Society of Chemical Industry will be conferred on Dr. Edward Weston on the evening of January 22, at the Chemist's Club, New York City. Dr. Charles F. Chandler will present the medal and an address will be made by Dr. L. H. Baekeland.

ON January 20, 1915, the Medical Society of the District of Columbia held a memorial meeting in honor of the late Dr. A. F. A. King, who died on December 13, 1914. The following appreciations were presented: In Memoriam, Resolutions by Committee, Dr. D. S. Lamb; Biographical Sketch, Dr. Henry D. Fry; Dr. King as an Author, Dr. Barton Cooke Hirst; Doctor King on Mosquitoes and Malaria, Dr. L. O. Howard; Doctor King as a Teacher, Dr. Sterling Ruffin; Doctor King as Dean of the Medical School, Dr. D. K. Shute; Personal Characteristics, Dr. A. R. Shands.

THE Rev. Sir John Twisden, formerly professor of mathematics in the Staff College of the British army, has died at the age of nearly ninety years.

M. ALFRED FOURNIER, formerly professor of dermatology and syphiligraphy at the University of Paris, has died at the age of eighty-two years.

BRITISH New Year's honors include two knighthoods conferred on scientific men—Dr. James Johnston Dobbie, F.R.S., principal of the government laboratories, formerly professor of chemistry at the University College of North Wales, and Frank Watson Dyson, F.R.S., astronomer royal since 1910.

DR. HENRY S. DRINKER, president of Lehigh University, was re-elected president of the American Forestry Association at the meeting held in New York City last week.

HERR KARL BENZ, founder of the German automobile firm, Benz and Company, has been given the doctorate of engineering by the Technical Institute of Karlsruhe.

THE council of the Geographical Society of Philadelphia has authorized the holding of monthly meetings for study and research, in addition to the usual illustrated lectures on travel and exploration. The first of these meetings was held on the evening of January 15, when Professor D. W. Johnson, of Columbia University, addressed members of the society on "The Physiographic Features of Western Europe and Their Influence on the Campaign against France." Professor Johnson has also given illustrated lectures on the same subject recently before the New York Academy of Sciences, the Brooklyn Institute of Arts and Sciences, and the American Geographical Society.

"Our Natural Resources: Their Economic Significance," is the subject of a series of illustrated lectures to be given by Associate Professor J. Paul Goode, of the department of geography in the University of Chicago, beginning January 11, at the Berwyn center of the University Lecture Association. The purpose of the course is to discuss the great resources of the country from the point of view of their physical origin, and to trace the influence of these physical conditions on our daily social life. The subjects of the individual lectures are as follows: "The Evolution of a Continent," "Our Obligation to the Forest," "The Age of Steel," "The Social Significance of Wheat," "The Reclamation of Arid Lands," and "When the Coal is Gone."

AN illustrated lecture was given by Professor R. D. Salisbury, dean of the Ogden School of Science, University of Chicago, on January 8, before the Southern Geographical Society, Knoxville, Tennessee. The subject of the lecture was "In and About Patagonia," and related to views and experiences of a stay of two months in that region for certain studies in connection with the Geological Survey of Argentina.

JOHN A. MATHEWS, Ph.D., Sc.D., general manager of the Halcomb Steel Company, will deliver on February 1, an illustrated address upon "Iron in Antiquity and To-day" before the Syracuse University chapter of Sigma Xi and the Syracuse branch of the Archeological Institute of America, of which Dr. Mathews is vice-president. The lecture will be illustrated and the date is February fifth.

WE learn from foreign journals that the memorial at Finse, Norway, in honor of Captain Scott and his companions was unveiled on December 28 by Dr. Skattum, vice-president of the Norwegian Geographical Society. The memorial has taken the form of a monument about 20 feet high bearing the names of the explorers—Captain R. F. Scott, Dr. Wilson, Captain L. E. G. Oates, Lieutenant H. R. Bowers and Petty Officer Evans—and an inscription reading: "Erected by Norwegians in honor of Antarctic research and heroic courage."

DR. J. W. SPENGEL, professor of zoology at Giessen, has been elected a foreign member of the Royal Upsala Academy of Sciences.

DR. JOHANN HJORT, director of the fisheries of Norway, lectured before the Washington Academy of Sciences and the Biological Society of Washington on January 19, his subject being "Migrations and Fluctuations of the Marine Animals of Western Europe."

AN English correspondent informs us that Professor Albrecht Penck who, since his return from Australia with a load of geographical information, had been detained in London by the British government, was allowed to go back to Berlin on December 31, since it no longer seemed probable that the Germans

would have any opportunity for making hostile use of his knowledge. While in London Professor Penck has been given all facility for his studies in the government museums and libraries, and in the rooms of the Geological Society of London.

ACCORDING to *Das Umschau*, Dr. Oskar Iden-zeller and his wife, sent last year by the Hamburg Museum of Ethnology to make explorations in northern Siberia, have been imprisoned. The St. Petersburg Academy of Sciences has sent a protest to the Russian minister of the interior.

THE Cutter Lectures in Preventive Medicine for the year 1915 will be given at the Harvard Medical School by Dr. Victor C. Vaughan, professor of hygiene and physiological chemistry and dean of the school of medicine and surgery of the University of Michigan, and Dr. Joseph Goldberger, surgeon, United States Public Health Service, Washington, D. C. Dr. Vaughan will lecture on "The Phenomena of Infection" on April 14, 15 and 16. Dr. Goldberger's subject will be "Diet and Pellagra" and will be given in one lecture on April 2. These lectures are given annually under the terms of a bequest from John Clarence Cutter, whose will provided that the lectures so given should be styled the Cutter Lectures on Preventive Medicine, and that they should be delivered in Boston, and be free to the medical profession and the press. Others interested are cordially invited.

DR. CLINTON WAGNER, formerly a well-known physician of New York, and first professor of laryngology and rhinology in the New York Post Graduate Medical School, has died in Switzerland at the age of seventy-four years.

SIR ROBERT SIMON, professor of therapeutics in the University of Birmingham, has died at the age of sixty-four years.

DR. KARL SCHNABEL, formerly professor in the Prussian mining school at Clausthal, has died at the age of seventy-two years.

PROFESSOR OTTO SACKUR has been killed by an explosion in the laboratory of the Kaiser Wilhelm Institute at Dahlem, where experi-

ments in high explosives were being conducted.

DR. HERBERT STANGE, docent for chemistry at Giessen, and Dr. F. W. Hinrichsen, docent for chemistry at the Berlin Technical School, have been killed while serving as lieutenants in the German army.

DR. M. HEYDE, docent for surgery at Marburg, and Dr. Karl Müller, assistant in the Institute of Oceanography at Kiel, have died from typhoid fever contracted while serving as physicians with the German army.

THE Civil Service Commission of Cook County, Ill., will hold an examination during the latter part of January, 1915, for the position of director of the Psychopathic Institute of the Juvenile Court. The director is required to make a thorough physical and mental examination, including laboratory and psychological tests, of the delinquent and dependent children referred to the institute by the court, and must interpret the tests and make reports of the examinations for the guidance of the judge in deciding the cases. The position pays \$5,000 per year, and any citizen of the United States may apply for entrance to the examination, but the applicants should have a medical degree or at least an experience in nervous and mental diseases, in practical psychology, or in psychopathic work among juveniles or adults, either in connection with courts or clinics. Persons interested in the examination may secure applications by addressing Cook County Civil Service Commission, Chicago, Illinois.

THE report of the proceedings of the general committee for promoting the establishment of an Imperial College of Tropical Agriculture is referred to in the *Pioneer Mail* of December 4 and quoted in *Nature*. It is stated that Mr. R. N. Lyne, director of agriculture, Ceylon, says he thinks that the West Indies will now support Ceylon's claims to be the home of the college. The committee resolved to take steps to raise £40,000 for building and endowing the college, of which £20,000 should be asked from the governments concerned, including India, and the remainder be raised by public sub-

scriptions, provided governments contribute the share stated. It was also resolved to collect £5,000 for the erection of a hotel for European students. The committee has not selected Ceylon for the site; at the same time it favors that country.

THE weekly French scientific journal, *La Nature*, which suspended publication at the beginning of August, began again on December 12.

DR. O. P. HAY, research associate of the Carnegie Institution of Washington, D. C., who is making a study of the Pleistocene vertebrates of North America for the institution, delivered before the Science Club of the University of Texas on December 21, an illustrated lecture entitled "The vertebrate fauna of the Pleistocene epoch." Dr. Hay called attention to the characteristic mammoth, mastodon, sloths, bison and horses of the Pleistocene, showing illustrations of the skeletons, jaws, and restorations of the more prominent species. A series of maps was exhibited showing the distribution of the various species during various stages of the Pleistocene.

UNDER the auspices of the department of geology and geography of Harvard University a series of five public lectures will be given in the geological lecture room, University Museum, at 4 P.M. These lectures have been arranged in response to a real interest in the influence which geographic conditions have or may have upon the present European war.

Monday, January 18.—"The Physical Geography of Central and Western Europe." (Illustrated.) Professor William M. Davis.

Wednesday, January 20.—"Some Military Features along the Western Front." Professor Robert M. Johnston.

Monday, January 25.—"European Weather and the War." Professor Robert DeC. Ward.

Wednesday, January 27.—"The Food Supply in Europe." Professor Thomas N. Carver.

Friday, January 29.—"Mineral Resources of Central and Western Europe." Professor Henry L. Smyth.

In connection with these lectures certain maps and charts of special geographic interest will be displayed in the lecture room, which will be open at 3:30 on the days of the lectures.

THE legislature efficiency committee, in its report on the administrative system of Illinois which appeared December 7, makes according to the *Journal of the American Medical Association* the following recommendations: The reorganization of the various health agencies into a state health department to be under the direction of a salaried health commissioner; an unpaid state health board of five officers to be appointed by the governor; the state health department to have supervision over the examination and licensing of physicians, pharmacists, dentists and nurses, and the regulation of those organizations which carry on other professions and trades for the protection of public health; a small board or committee to be provided for each profession to arrange for examinations, issue licenses and to revoke same for cause; the clerical and administrative work in connection with such examinations to be handled through one office and the action of the examining boards in revoking licenses, to be subject to review by the state board of health. The board of barbers' examiners to be abolished and the power of sanitary control over barbers to be exercised by the health department; the law for the collection of vital statistics to be made more effective; the pharmacy law to be revised; the cold storage of food products to be regulated and a state sanitary code to be enacted.

PART of the government's exhibit for the Panama-California exposition at San Diego leaves Washington this week. This portion has to do with the national forests of New Mexico, and will be shown in the New Mexico building, the exhibit having been prepared in cooperation with the state board of exposition commissioners of that state. The material also shows specimens of the principal timber trees of New Mexico and their uses. Other exposition material is to leave soon for San Francisco, where it will form a part of the Panama-Pacific exposition. Part of this is being prepared through cooperation between the forest service and the United States civil service commission. The commission passes on the qualifications of all candidates for

positions in the forest service, testing the fitness of those who wish to become forest officers through outdoor examinations in riding, surveying, timber estimating, and similar matters as well as by more conventional methods; its exhibit will illustrate the duties of these officers. Cooperation also exists in the preparation of exhibit material, between the forest service and the bureau of education. This shows how forest subjects are used in the public schools, in connection with nature study, commercial geography, agriculture and the like. One of the exhibits is a display made by the normal school pupils of the District of Columbia, in which a number of those who are studying for teachers' positions entered a prize contest on tree study. Each of the contestants prepared a separate exhibit showing the life history and the products of individual trees, such as white pine, hickory or sugar maple.

UNIVERSITY AND EDUCATIONAL NEWS

POMONA COLLEGE, Claremont, Cal., has completed the collection of an endowment fund of one million dollars toward which the General Education Board contributed \$150,000.

MRS. RUSSELL SAGE, who had undertaken to give \$100,000 towards a \$500,000 dining hall for Princeton University, has increased her offer to \$250,000, provided an equal sum is collected by July 1. Sums amounting to \$75,000 have been subscribed, of which \$30,000 are due to efforts of the sophomore class.

By the will of the late Dr. T. Bell, of Newcastle, the sum of £3,000 is bequeathed to the Armstrong College.

DR. P. J. ANDERSON, formerly field pathologist with the Pennsylvania commission for the investigation and control of the chestnut blight disease, has been appointed instructor in botany at the Massachusetts Agricultural College.

DR. HARRY M. ULLMANN has been made professor of chemistry at Lehigh University, in charge of the department. Ralph J. Fogg, assistant professor in the department of civil engineering, has been made associate professor.

DISCUSSION AND CORRESPONDENCE

OCCURRENCE OF SILVER SCURF OF POTATOES IN THE SALT LAKE VALLEY, UTAH

WHILE making a plant disease survey in the Salt Lake Valley, Utah, during the past season the writer's attention was called to some diseased potatoes, which, upon examination, proved to be infected with the silver scurf fungus (*Spondylocladium atrovirens* Hartz). Microscopic examination of the organism together with the study of the fungus in pure culture proved its identity beyond a doubt. Both the conidial and sclerotial stages were found in great abundance on potato tubers collected from various parts of the valley. The conidia are dark brown and elongate-ovate with the apex narrowed and subhyaline. They are found to be five to eight celled, and average approximately 42 microns in length by about 8½ microns in diameter. A large number of measurements gave lengths ranging from 30 to 75 microns, and diameters ranging from 6 to 11 microns. The conidia are borne in more or less irregular whorls on the upper half of the conidiophores which vary considerably in length, but averaging about 125 microns. In addition to the characters of the fungus, the typical appearance of infected spots on the tubers leaves no doubt as to the identity of the disease; the silvery or glistening appearance of the spots showing very plainly. The presence of the minute black sclerotia is also very characteristic. Typical specimens of discolored, shrunken and shriveled tubers showing the later stages of the disease were also found in considerable abundance.

Very little is to be found on this disease in American plant pathological literature. It was first seen by Clinton¹ in 1907; Orton² mentions it as spreading rapidly in the eastern states; Melhus³ states that the disease has been found on potatoes from Maine, Vermont, New York, Virginia, West Virginia,

¹ Clinton, G. P., Connecticut Agricultural Experiment Station, Annual Report, 1908.

² Orton, W. A., Farmers' Bulletin No. 544, U. S. Department of Agriculture.

³ Melhus, I. E., Circular No. 127, Bureau of Plant Industry, U. S. Department of Agriculture.